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Nonperturbative renormalization of HQET operators in position space

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Position-space schemes are very natural gauge-invariant non-perturbative renormalization schemes to implement on the lattice. The tradeoff is that the perturbative calculations required to convert to more typically used schemes such as MS are more theoretically involved. We present dimensionally regulated perturbative calculations of a set of HQET operators in position-space, allowing for conversion of bare matrix elements measured on the lattice to MS. The operators of interest include those appearing in the OPE for lifetime measurements of B-hadrons.

Topical area

Quark and Lepton Flavor Physics

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